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**May 29, 2024**

**BY ECF**

Hon. Alvin K. Hellerstein  
United States District Judge  
Southern District of New York  
500 Pearl Street  
New York, NY 10007

Re: United States v. Sung Kook (Bill) Hwang, et al., No. 22 Cr. 240 (AKH)

Dear Judge Hellerstein:

On behalf of defendant Bill Hwang, we respectfully seek to preclude the prosecution from offering the following charts and related testimony through its expert witness, Dr. Carmen Taveras.<sup>1</sup> Many of these charts contain arguments appropriate for summation, but not for inclusion as summary charts under Federal Rule of Evidence 1006. Other charts fail to meet the admissibility standards under *Daubert*, or improperly intrude on the jury's sole province to determine questions of intent. Others are misleading or unduly prejudicial under Federal Rule of Evidence 403.

By way of context, after more than two weeks of trial, the prosecution has yet to call a *single* witness from Archegos to testify regarding the trading practices at the heart of this market manipulation case. The prosecution finally seeks to launch that effort—but not through any Archegos trader (including one of its cooperating witnesses, William Tomita). Instead, the prosecution seeks to call Dr. Carmen Taveras, another government employee, to tell the prosecution's story through a series of charts. As explained in greater detail below, much of Dr. Taveras's anticipated testimony and accompanying charts constitutes improper summation or intent evidence, lacks expert foundation, or is misleading and unduly prejudicial under Rule 403. We understand the prosecution intends to call Dr. Taveras on Thursday this week.

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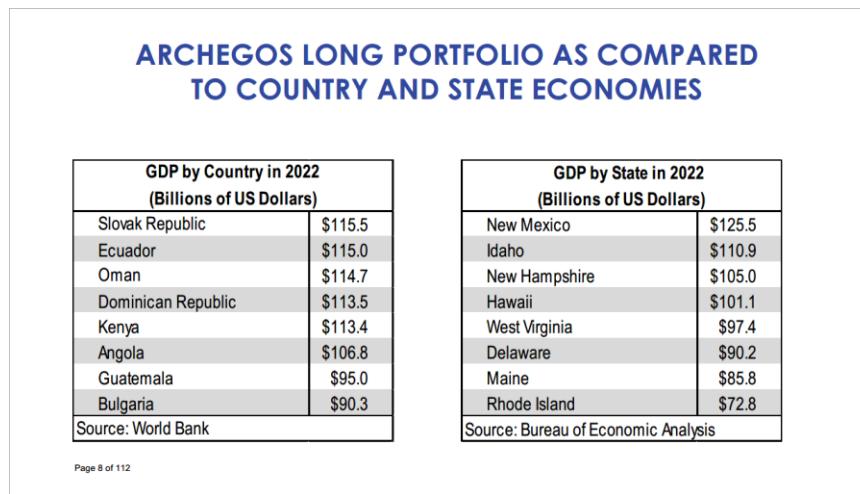
<sup>1</sup> The defense does not object to the following charts in GX-9005, which contain proper summary exhibits under Federal Rule of Evidence 1006: charts 1-3, 9, 15-16, 18-19, 23, 53, and 102-103.

Federal Rule of Evidence 1006 permits the use of “a summary chart or calculation to prove the content of voluminous writings, recordings, or photographs that cannot be conveniently examined in court.” Fed. R. Evid. 1006. In other words, the summary is offered as a substitute for the underlying documents because the documents themselves are too difficult to review. *See Walker v. Time Life Films, Inc.*, 784 F.2d 44, 52 (2d Cir. 1986) (“The Rule is designed to deal with the problem of writings, recordings, or photographs which cannot conveniently be examined in court by allowing them to be presented in chart or summary form.” (internal quotation marks and alteration omitted)). The purpose of summary charts therefore is *not* to present argument, and the prosecution must not be permitted to present a mid-trial summation through such charts. *See Peat, Inc. v. Vanguard Research, Inc.*, 378 F.3d 1154, 1159-60 (11th Cir. 2004) (“[B]ecause ‘summaries are elevated under Rule 1006 to the position of evidence, care must be taken to omit argumentative matter in their preparation lest the jury believe that such matter is itself evidence of the assertion it makes.’”) (quoting *United States v. Smyth*, 556 F.3d 1179, 1184 n.12 (5th Cir. 1977)). Rather, summary charts must be “nonprejudicial” and presented in a “nonmisleading manner.” *United States v. Bray*, 139 F.3d 1104, 1110 (6th Cir. 1998) (citations omitted). Indeed, “a summary [chart] containing elements of argumentation could very well be the functional equivalent of a mini-summation by the chart’s proponent every time the jurors look at it during their deliberations,” *id.*, and thus many of Dr. Taveras’s charts and her related testimony must be precluded.

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**Objection #1: Chart Comparing the Size of Archegos’s Trades to the Gross Domestic Product of Sovereign Entities.<sup>2</sup>**

The following chart is just one example of the argumentative, misleading, and unduly prejudicial material Dr. Taveras seeks to present:



There is no dispute that Mr. Hwang was a large investor and that he took sizeable positions in a small number of companies. That is not unusual on Wall Street. But there is no

<sup>2</sup> The defense objects to chart 8 of GX-9005 on this basis.

conceivable relevance to comparing the size of his portfolio to the gross domestic product of the Slovak Republic, or various states of the union. This chart is nothing more than improper hyperbole.

**Objection #2: Charts Comparing the Stock Prices and Limit Prices Used by Archegos.<sup>3</sup>**

The prosecution offers more than 60 charts seeking to show that the market price of a given security rose as the limit price—the top price Archegos was willing to pay for the security—rose. An example of one of these charts is depicted below:



These charts are problematic for several reasons. First, they are misleading and unduly prejudicial because they seek to criminalize normal market behavior. As reflected in the chart above, between 3:40 p.m. and 3:45 p.m., the market price, reflected by the gray dots, was above the limit price set by Archegos, reflected by the blue line. In other words, Archegos's order would not execute because the stock was trading higher than the maximum price Archegos was offering to buy it. Naturally, in an effort to buy the desired swap, Archegos raised its limit price. Because these charts misleadingly suggest that raising limit prices in response to rising market prices is improper, they should be excluded.

Second, the admission of these charts would intrude on the jury's sole province in deciding questions of intent. These charts create a false and misleading "factual basis" that Mr. Hwang's trades, rather than other market or company-specific factors, caused the prices of the At-Issue Securities to rise, from which Dr. Taveras may improperly suggest or the jury may improperly infer that Mr. Hwang intended to move those stock prices. At the pretrial conference on April 11, 2024, this Court made clear that experts for both the prosecution and the defense were not permitted to testify regarding the defendants' intent. *See* Pretrial Conference Tr. at 11:22-23 (April 11, 2024) (ruling that prosecution expert "can't suggest a state of mind"); *id.* at 36:19-20 (the Court "will sustain the objection if [defense expert] goes into intent"); *see also* Fed. R. Evid. 704(b) ("In a criminal case, an expert witness must not state an opinion about whether the defendant did or did not have a mental state or condition that constitutes an element of the crime charged or of a defense. Those matters are for the trier of fact alone."). These

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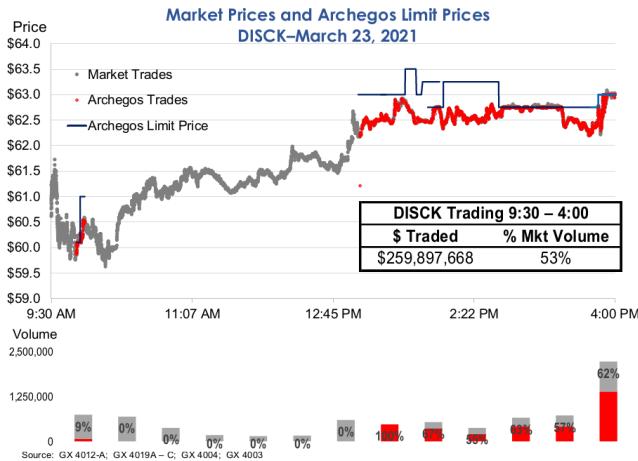
<sup>3</sup> The defense objects to charts 32-52 and 54-100 of GX-9005 on this basis.

charts are precisely the type of intent evidence that the Court precluded the parties from introducing. As of today, the prosecution has not presented a *single* witness who has testified regarding his or her personal observations of Mr. Hwang's trading. Dr. Taveras and her charts are simply no substitute for evidence of Mr. Hwang's intent, and the prosecution must be prohibited from using her charts or her related testimony for such an impermissible purpose.

Third, the charts fail to satisfy the standards for admissibility under *Daubert*. Dr. Taveras has undertaken no statistical analysis of what *caused* the market price to increase. Many market or company-specific factors can affect stock prices, and for that reason, the Second Circuit has held that testimony to this effect is improper without an event study excluding other factors that may have contributed to price changes. *See United States v. Ferguson*, 676 F.3d 260, 274-75 (2d Cir. 2011). And the charts themselves belie Dr. Taveras's ability to draw any causal inference from them. For instance, in many cases, these charts show that Archegos changed its limit price in response to changes in the stock price—not the other way around.



Other charts show the stock price stayed flat, even when Archegos raised its limit prices.



Still others show the stock price changed, even when Archegos's limit price did not.



And others yet show stock prices trading *above* Archegos's limit price, proving Archegos's limit prices were not what drove them there.



These examples *from Dr. Taveras's own charts*, and others like them, reveal the impossibility of drawing causal inferences from this data, which negates any fair import they could possibly have and highlights the extent to which they are misleading.

Fourth, the charts' juxtaposition of market prices for the At-Issue Securities and Archegos's limit prices suggests a causal relationship that has no factual foundation. To the contrary, it is an argument—if not mere *ipse dixit*—that these two factors are causally related, and the charts should therefore be excluded as improper summation and not admitted as summary evidence under Rule 1006.

For all these reasons, the Court should preclude Dr. Taveras's charts depicting the purported causation between the prices of Archegos's limit orders and the market prices of the At-Issue Securities.

**Objection #3: Slides Seeking to Show Archegos Sought to Amass Market Domination by Falsely Equating Swap Ownership with Shareholding.<sup>4</sup>**

Seeking yet again to show Mr. Hwang dominated the float in stocks he did not own, the prosecution—through Dr. Taveras—suggests that swaps are equivalent to shares and that swap ownership is analogous to shareholding.

But swaps are not shares. As trial testimony has made clear, when Archegos entered a swap, it never bought a share—and it never acquired control over any shares either. *See* Trial Tr. 1251:25-1252:6 (Becker) (“Q: . . . Archegos is not owning or controlling the shares or the security, correct? A: Yes, that’s correct.”); *id.* at 1252:8-11 (Becker) (“Q. . . Archegos has no ability to force the bank to buy the shares of the stock, correct? A. That’s correct.”); *id.* at 1254:16-19 (Becker) (“THE COURT: . . . it’s not necessarily what we call a one-to-one relationship. One party’s transaction will not automatically trigger a hedge. . . . A. Yes, that’s my understanding . . .”)

Indeed, only the counterparty bank bought shares. *Id.* at 1559:19-24 (Lukeman) (“A. . . the stock belongs to Credit Suisse and the swap belongs to Archegos . . .”); *id.* at 1588:14-17 (Lukeman) (“A. The hedges sit on our books, so we own them.”). And even then, the counterparty banks sold, lent, or otherwise transferred an untold number of these shares after buying them. *Id.* at 1255:14-22 (Becker) (“Q. Are you familiar, sir, that . . . at times the banks will lend out the shares to short sellers who are interested in having those shares? . . . A. . . . My general understanding is that may occur.”); *id.* at 1603:3-11 (Lukeman) (“THE WITNESS: . . . In this example, it’s when a stock is swapped off the books . . . So if Credit Suisse has a position that they are swapping off in this case, it would be selling the stock on the close.”); *id.* at 1604:2-11 (Lukeman) (“Q. . . . you also testified earlier that . . . the hedges . . . can be loaned out . . . ? A. Stock loan, yes, right.”).

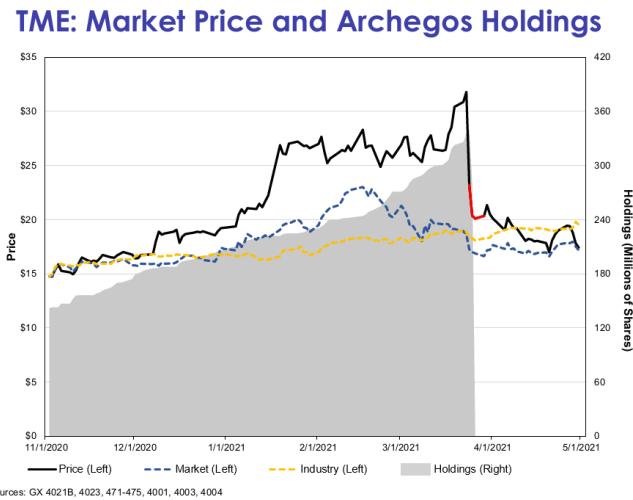
But Dr. Taveras equates swaps and shares anyway. By way of example, in one chart, Dr. Taveras compares Archegos’s swap positions to the percentages of shares outstanding at various companies, which falsely suggests the two types of securities are equivalent:

**TOP POSITIONS EXCEEDED 5%, 10%, 20%  
OF SHARES OUTSTANDING**

Security	First date with holdings greater than and remaining above		
	5%	10%	20%
Baidu, Inc (BIDU)	7/23/2020	11/17/2020	3/18/2021
Discovery, Inc (Class A) (DISCA)	11/17/2020	11/25/2020	12/7/2020
Discovery, Inc (Class C) (DISCK)	1/27/2021	2/9/2021	3/8/2021
Forfetch, Ltd (FTCH)	9/4/2020	12/14/2020	3/3/2021
GSX Techedu, Inc (GSX)	5/1/2020	5/20/2020	8/24/2020
iQIYI, Inc (IQ)	1/2/2019	5/14/2019	6/24/2020
Texas Capital Bancshares, Inc (TCBI)	3/21/2019	3/10/2020	10/13/2020
Tencent Music Entertainment Group (TME)	5/1/2020	8/11/2020	10/29/2020
ViacomCBS Inc (VIAC)	5/22/2020	7/14/2020	9/23/2020
Vipshop Holdings Ltd (VIPS)	1/2/2019	9/11/2020	1/26/2021

<sup>4</sup> The defense objects to chart 22 of GX-9005 on this basis.

Several of Dr. Tavares's charts also use shares as a way of measuring Archegos's swap positions, which—again—falsely suggests they are the same, including the below:



For all these reasons, the Court should preclude any charts, or parts of charts, that improperly equate swaps and shares.<sup>5</sup> With respect to charts that reference shares only as way to measure the value of Archegos's swap positions, the Court should direct the prosecution to change any characterization of them as "shares" to "swaps"—and any metrics used in measuring their value to "number of shares equivalent in value to the Archegos swap positions," rather than the number of "shares," "holdings," or anything similar.<sup>6</sup>

**Objection #4: Charts Seeking to Show Archegos Sought to Amass Market Domination and Manipulate Stock Prices by Concentrating its Investments in the At-Issue Securities.<sup>7</sup>**

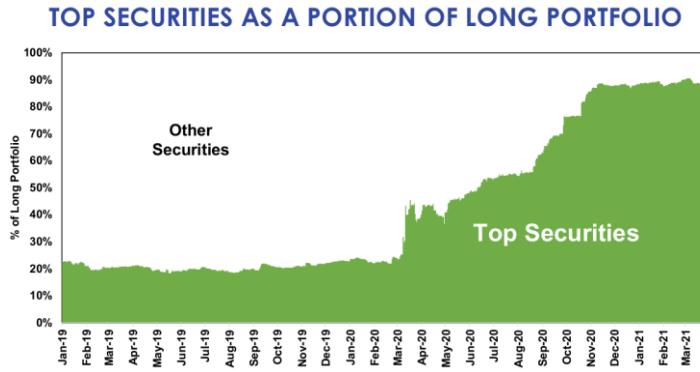
Dr. Taveras also presents charts that falsely obscure the fact that Archegos's investments were *historically* concentrated in its top positions, through the use of charts like the below:

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<sup>5</sup> The defense objects to chart 8 of GX-9055 on this basis.

<sup>6</sup> The defense objects to charts 17, 24-30, and, to the extent they are not excluded outright, *see* Objections #5 and #8, *infra*, charts 31 and 104-112 of GX-9055 on this basis.

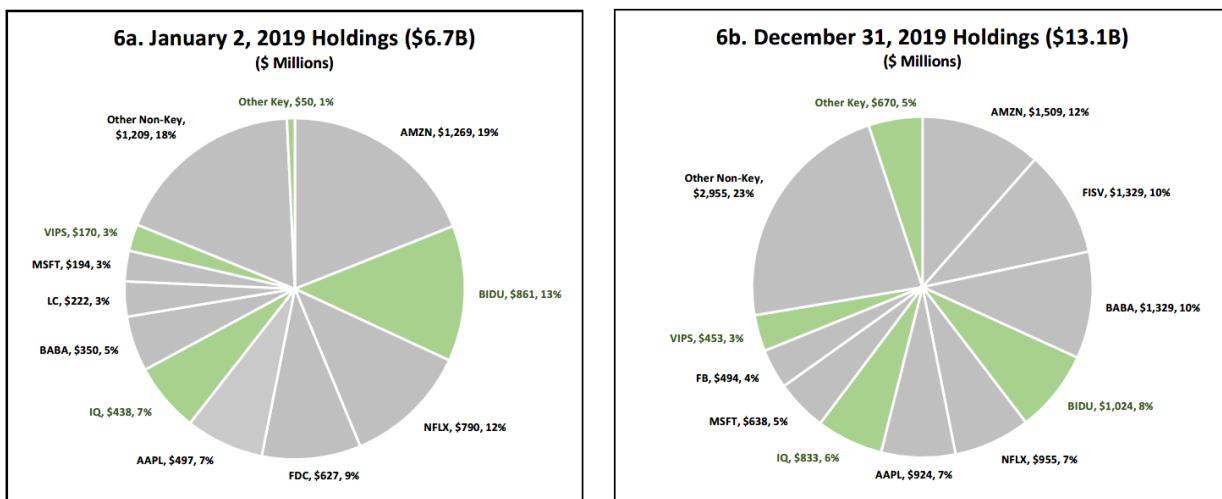
<sup>7</sup> The defense objects to chart 14 of GX-9055 on this basis.



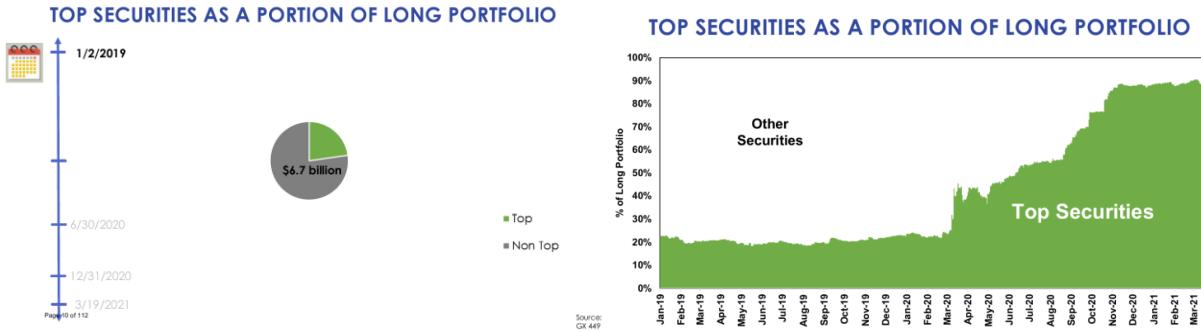
Charts of this ilk are argumentative and misleading, because they falsely equate Archegos's "Top Securities" with the At-Issue Securities, as the below slide reflects:



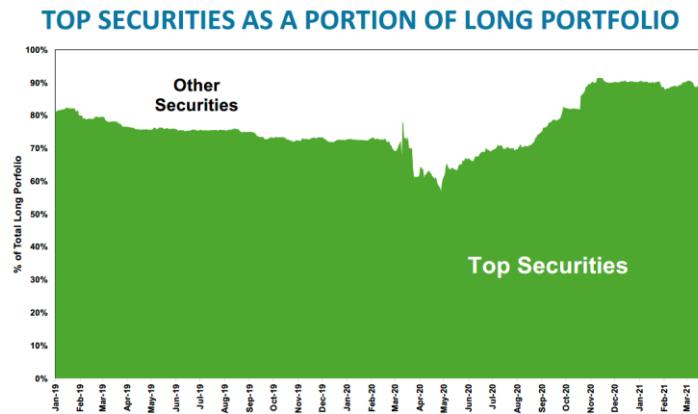
But the At-Issue Securities were not always Archegos's "Top Positions." Indeed, Dr. Taveras's earlier charts, included in her January 31, 2024 supplemental expert disclosure, explain as much: in 2019, the top ten positions in Archegos's portfolio accounted for 81% (January) and 72% (December), respectively:



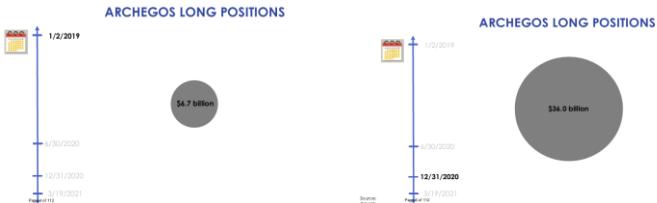
By contrast, Dr. Taveras's more recent charts, which were produced on May 10, 2024, obscure that fact completely:



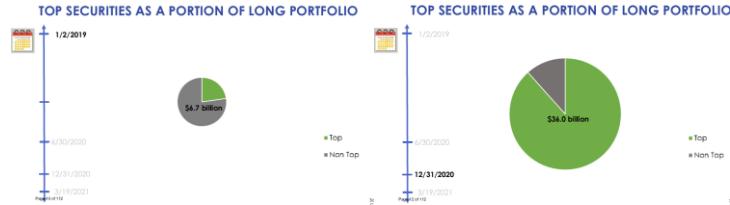
This is argument—and it is misleading. If these charts depicted Archegos's actual top-ten positions, rather than the At-Issue Securities, they would show Archegos's concentration in its top positions remained roughly constant, as the below comparison (prepared by the defense) reflects.



To make these charts fair and accurate, the Court should direct the prosecution to change the titles of these charts from “Top Securities” to the “At-Issue Securities.” And the Court should require the prosecution to present this data in straightforward and nonprejudicial charts, rather than exaggerated and ever-expanding circles (such as the below).<sup>8</sup>

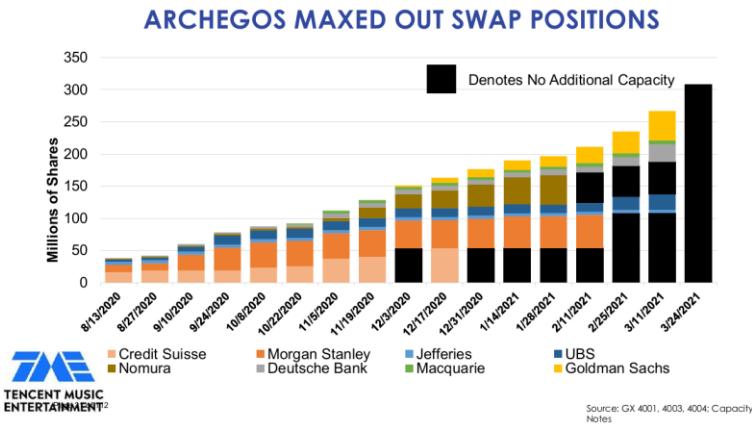


<sup>8</sup> The defense objects to charts 4-7 and 10-13 of GX-9005 on this basis.



### **Objection #5: Charts Seeking to Interpret Scott Becker's Capacity Notes.<sup>9</sup>**

The Court should also preclude any charts based on Dr. Taveras's review of Scott Becker's capacity notes. By way of example, the prosecution seeks to admit the following through Dr. Taveras:



First, Dr. Taveras has no expertise to offer this testimony. She did not work at Archegos or any of the counterparty banks, and she apparently has not interviewed Scott Becker. Her review and interpretation of his capacity notes is entirely improper. Indeed, the prosecution could have elicited this testimony from lay witnesses who had personal knowledge of the capacity notes and their meaning. For instance, Mr. Becker, the author of the underlying capacity notes, was uniquely positioned to interpret the relevant documents and explain their import. By introducing this information through an expert witness instead, the prosecution has denied the defense the opportunity to assess the reliability of their author's interpretation of the relevant documents, which is critical to understanding them. That alone warrants preclusion.

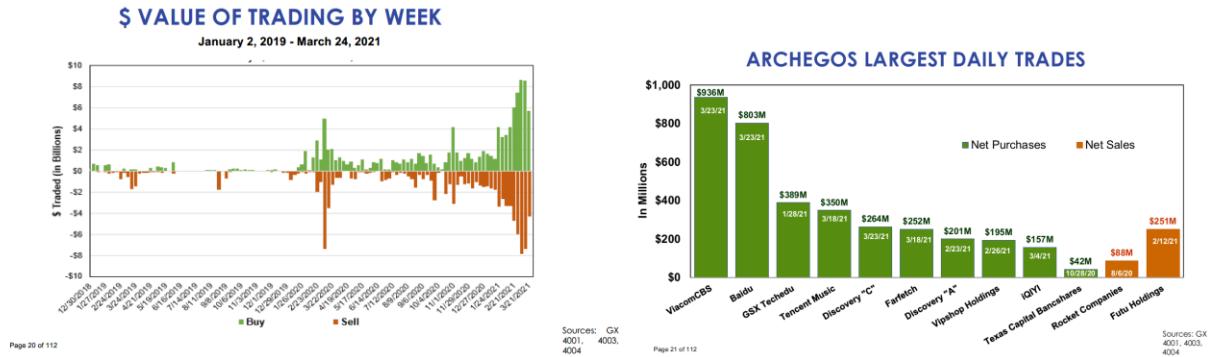
Moreover, Dr. Taveras's supposed conclusions from the review of Becker's capacity notes are unreliable, because the notes are ambiguous and the figures themselves are fluid, even on a daily basis. By way of example, one "Capacity Note" describes available capacity as follows: "NOM swap: +50mm @ 20.4%, + 100mm @ 20.6%, + 150mm @ 211"—leaving Dr. Taveras with three possible interpretations of available capacity, all of which are conceivably accurate. *See, e.g.*, GX-0701A (the dollar amount reflects the available capacity, and the percentage reflects the margin rate applicable to that capacity). Worse yet, Dr. Taveras fails to account for the possibility that Archegos could negotiate for additional borrowing capacity, were it ever lacking (under one metric or another), including over the course of the same day a given

<sup>9</sup> The defense objects to chart 31 of GX-9005 on this basis.

capacity note was prepared. Indeed, as fluid figures subject to negotiation, Archegos's capacity limits defy ready quantification—which alone warrants preclusion of this slide and related testimony.

**Objection #6: Charts Depicting Growth in Archegos's Investments and Trading Without Considering The Growth in Archegos's Capital.**<sup>10</sup>

As for charts showing the growth in the value of Archegos's trades, Dr. Taveras offers, for instance, the following:



These charts are misleading because they fail to consider the growth in Archegos's capital position, which offers the natural explanation for why Archegos's investments grew over time. Without that context, any inference the jury draws from them would be incomplete, misleading and argumentative.

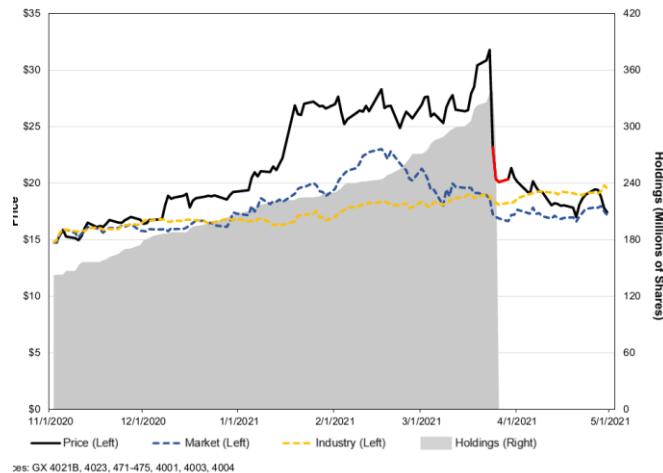
**Objection #7: Charts Depicting Stock-Price Declines Following the Liquidation of Archegos's Positions.**<sup>11</sup>

The defense objects to any charts depicting the stock-price decline in the At-Issue Securities following Archegos's liquidation, including, for instance, the below:

<sup>10</sup> The defense objects to charts 20 and 21 of GX-9005 on this basis.

<sup>11</sup> The defense objects to charts 104-112 of GX-9005 on this basis.

### TME: Market Price and Archegos Holdings



In addition to falsely equating swaps with shares, these charts are misleading and unfairly prejudicial because they fail to exclude extrinsic market and company-specific factors that contributed to the price decline, which risks leaving the jury with the misleading and unfairly prejudicial inference that the entire decline was attributable to Archegos. *See Ferguson*, 676 F.3d at 274-75 (vacating criminal convictions and holding that district court abused its discretion by admitting stock-price-drop charts without the foundation of expert testimony excluding confounding factors that contributed to price decrease). These charts fail to acknowledge (let alone exclude) the effect of numerous market events that occurred around the time of this decline, including: (1) the “fire sale” of Archegos’s securities which drove down prices on March 25 and 26, Trial Tr. 325:15-326:25 (Fairbanks) (describing the liquidation on March 26, 2021 as a “firesale” that “pushed the prices down”); (2) news reports those same days concerning the potential delisting of Chinese technology stocks from American exchanges and potential antitrust investigations into one of the at-issue companies<sup>12</sup>; and (3) the unsuccessful secondary offering of Viacom.<sup>13</sup>

Without excluding those factors, these charts falsely imply that the performance of the At-Issue Securities that week was solely attributable to Archegos’s actions (or inactions), rather than the complex web of market conditions occurring alongside them. Lacking that context, the Court should preclude these slides as lacking foundation, as well as false, misleading, and unfairly prejudicial.<sup>14</sup> Moreover, the admission of these charts would result in an unduly high

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<sup>12</sup> *See, e.g.*, Reuters, “Tencent boss reportedly met with China antitrust officials as scrutiny widens” (Mar. 24, 2021), <https://www.cnbc.com/2021/03/24/tencent-boss-met-with-china-antitrust-officials-amid-scrutiny-reuters.html>.

<sup>13</sup> *See, e.g.*, Jessica Bursztynsky, “ViacomCBS stock closes down 23% as Wall Street expresses doubt about streaming execution,” CNBC.com (Mar. 24, 2021), <https://www.cnbc.com/2021/03/24/viacom-stock-drops-as-investors-express-doubt-on-streaming-execution.html>.

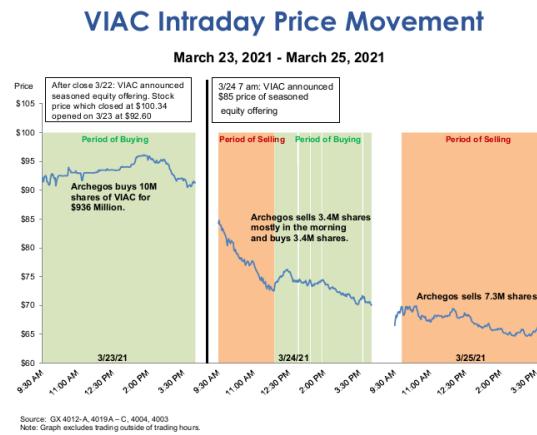
<sup>14</sup> As explained in Mr. Hwang’s *Daubert* motion to exclude Dr. Taveras’s proposed expert testimony and omnibus motion in limine, the defense takes the position that admitting these

risk of intruding on the jury's sole province in determining Mr. Hwang's intent. These charts create a false and misleading factual basis that Mr. Hwang's trades, rather than other market conditions, caused the prices of the At-Issue Securities to rise, from which Dr. Taveras may improperly suggest or the jury may improperly infer that Mr. Hwang intended to move those stock prices. These charts fall under the category of intent evidence that the Court precluded the parties from introducing. *See* Pretrial Conference Tr. at 11:22-23 (April 11, 2024); *id.* at 36:19-20.

The charts are also misleading, confusing, and prejudicial because Dr. Taveras uses measurements on two y-axes scaled specifically to indicate that Archegos's swap positions, reflected in gray, followed the market price, reflected with the black line. The charts only paint this picture because of the way Dr. Taveras has chosen to scale the chart. In doing so, Dr. Taveras again suggests a causal relationship when she has undertaken no causation analysis. These charts are highly likely to mislead the jury into believing there is a causal relationship between Archegos's swap positions and the market price when Dr. Taveras has not analyzed this point, and accordingly, they should be excluded.

**Objection #8: Chart Depicting Viacom Three-Day Price Movement.**<sup>15</sup>

The defense also objects to the following chart, which purportedly depicts the stock-price trajectory of Viacom from March 23 to March 25, 2021, because it is misleading and argumentative, and not a proper "summary chart":



Page 101 of 112

By comparing Viacom's stock-price trajectory to Archegos's buying and selling, Dr. Taveras seeks to imply that Archegos's trading was what caused Viacom's stock price to behave the way it did. That is argument—and it is misleading because—as explained above—no

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charts would be reversible error. *See* Defendant Bill Hwang's Motion to Exclude Proposed Expert Testimony of Robert Battalio, Amit Seru, Carmen Taveras, and Joseph Mason at 30-32, ECF No. 163; Defendant Bill Hwang's Omnibus Motions *in Limine* at 2-6, ECF No. 156.

<sup>15</sup> The defense objects to chart 101 of GX-9005 on this basis.

analysis of this type could be reliable without excluding confounding market and company-specific factors, which Dr. Taveras did not do.

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For the foregoing reasons, Mr. Hwang respectfully objects to the admission of Dr. Taveras's charts and any accompanying testimony, including with respect to the specific charts identified in this letter.<sup>16</sup>

Respectfully submitted,

/s/ Barry H. Berke

Barry H. Berke  
Dani R. James  
Jordan Estes  
Michael Martinez

cc: Counsel of record

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<sup>16</sup> With respect to charts 4-7, 10-13, and 24-30, the defense objects to them only in part, subject to the modifications proposed in this letter (including with respect to the equivalence of swaps and shares) and will consult with the prosecution regarding those changes.